

# Pure Fishing

CASE  
SUMMARY

20



## PURE FISHING

Spirit Lake, Iowa  
Dickinson County

Intern: Brian Hartsell  
Major: Mechanical Engineering  
School: Iowa State University



### The Company

The sole focus of Pure Fishing is sport fishing. Fishing line and baits are manufactured out of the Spirit Lake, Iowa plant. In 10 years, Pure Fishing has tripled in size, and over this same time period has expanded from three countries to 18. Its products are sold at more than 15,000 retailers and reach 77 countries.

### Project Background

Pure Fishing has always put an emphasis on reducing waste and recycling when possible. Because of rising energy consumption in the plant, Pure Fishing applied for a DNR intern to help analyze the causes of increased energy use and to find ways to reduce energy consumption.

### Incentives to Change

Pure Fishing wants to minimize its effect on the environment because the business relies on the environment. Preserving the environment means preserving both the business and the sport the company loves.

### Results

There were four opportunities identified for potential annual savings:

**1. Compressed Air System and Air Leaks - \$12,850.**

The air receivers run at a pressure of 129psi and then are regulated down to 96psi in the plant. A reduction of this pressure by 20psi will save \$2,570/year. Utilizing cooler air from outside instead of hot compressor room air will save nearly \$920/year. Repairing all of the major air leaks around the plant will reduce operating costs of the compressor by \$9,360/year.

**2. Injection Molders - \$19,815.** Currently, some of the injection molders are too big for the molds and use an excessive amount of energy. Replacing these problem molders will provide a significant energy savings and has a variable Return of Investment (ROI) of 1.5 to three years, depending on the cost of used molders.



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**3. Scrap Bait Remolding** - \$63,240. Scrap bait is being sold off to avoid landfilling. Utilizing a remolding procedure for the top nine bait formulas will provide a significant savings and reduce the amount of waste leaving the plant. No extra equipment is needed – only procedural changes. Remolding this bait will decrease the amount of scrap bait sold by about 12 percent.

**4. Energy Management** - \$7,830. A walkthrough of the plant during the third shift revealed that many lights and machines were left running while nobody was in the area. These are quick fixes that usually just involve flipping a switch or a circuit breaker at the end of a shift.

The proposed outcomes of these projects were more than 930,000 kWh/year of energy reduction, a 12 percent reduction in the amount of scrap bait sold, and cost savings of \$103,735 per year.



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